WO 2005/011571

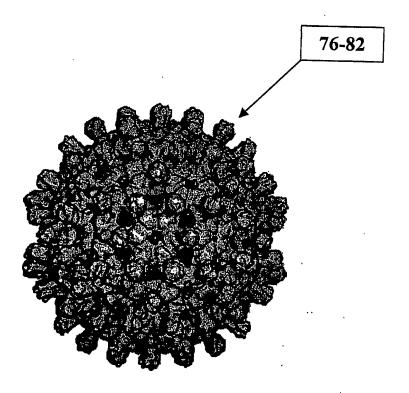


Fig. 1

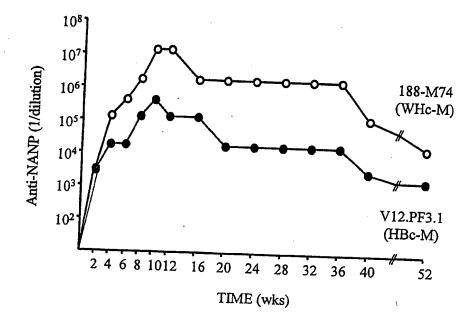


Fig. 2

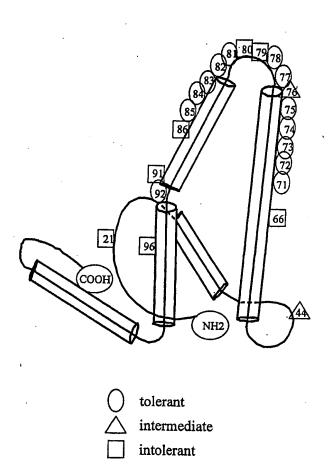


Fig. 3



Fig. 4

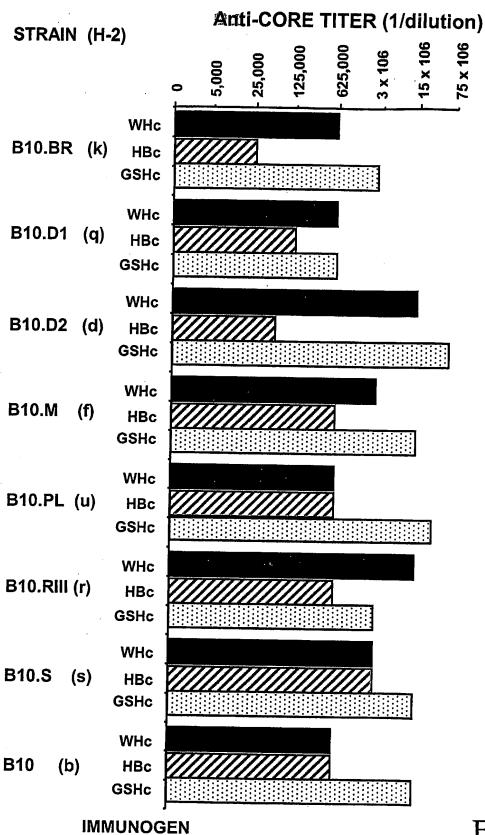


Fig. 5

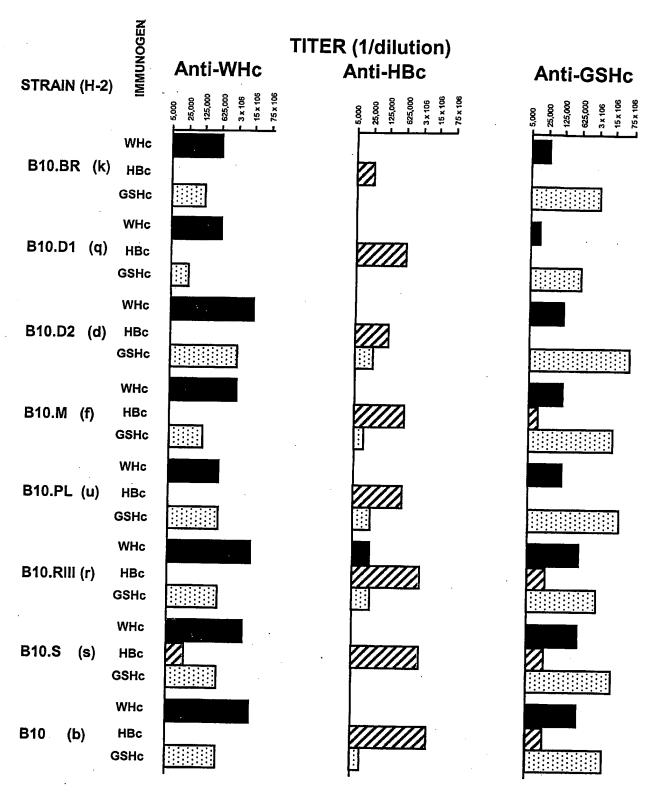


Fig. 6

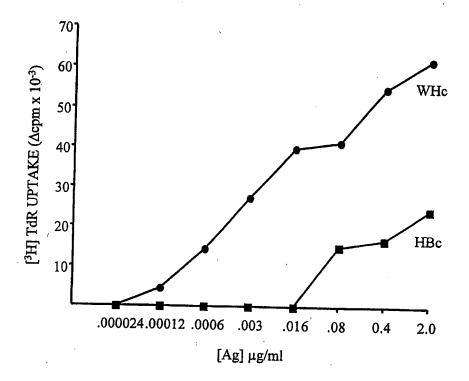


Fig. 7

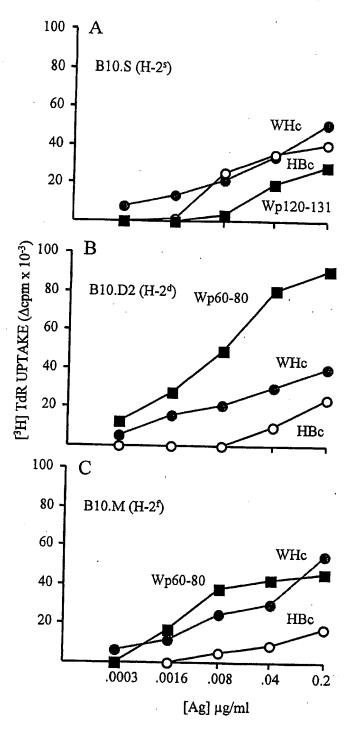
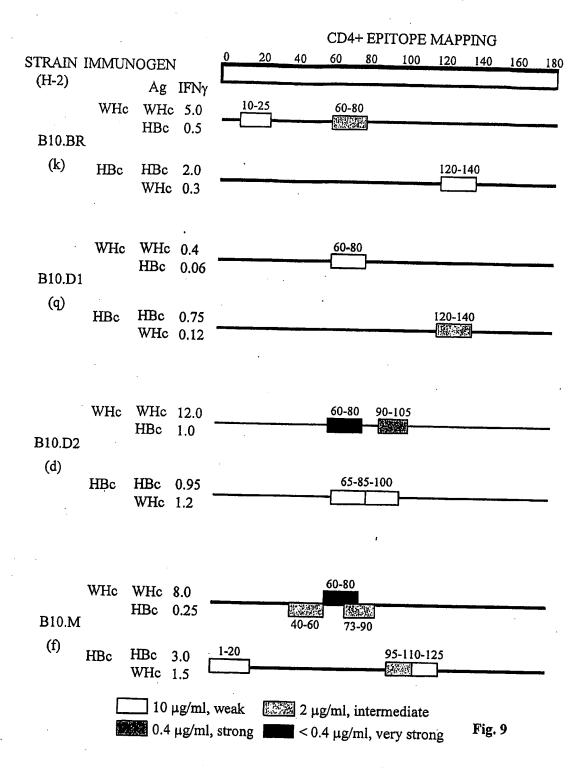
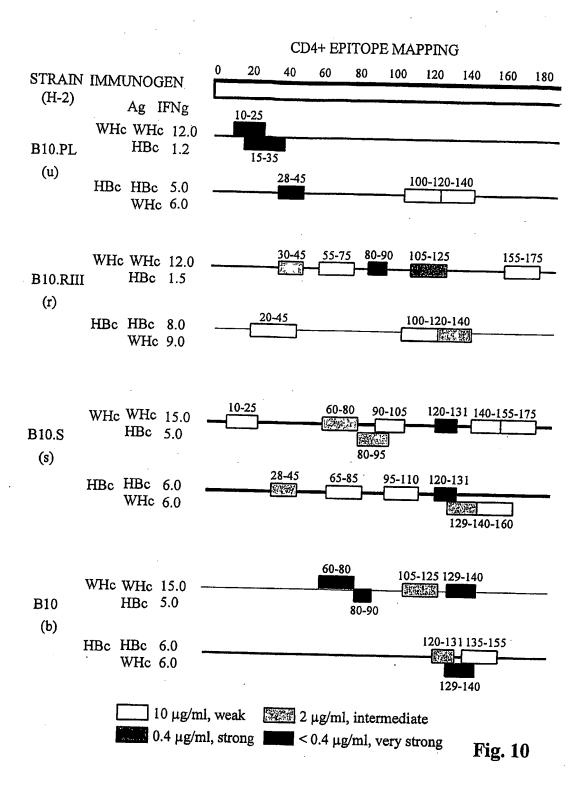


Fig. 8





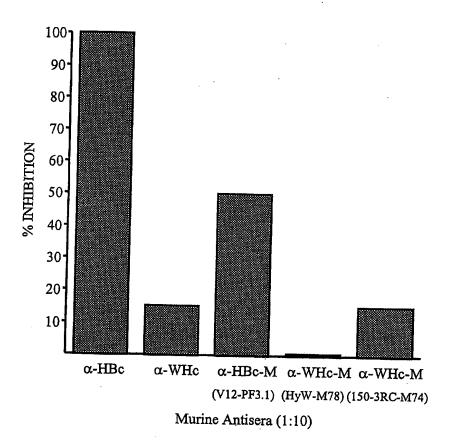


Fig. 11

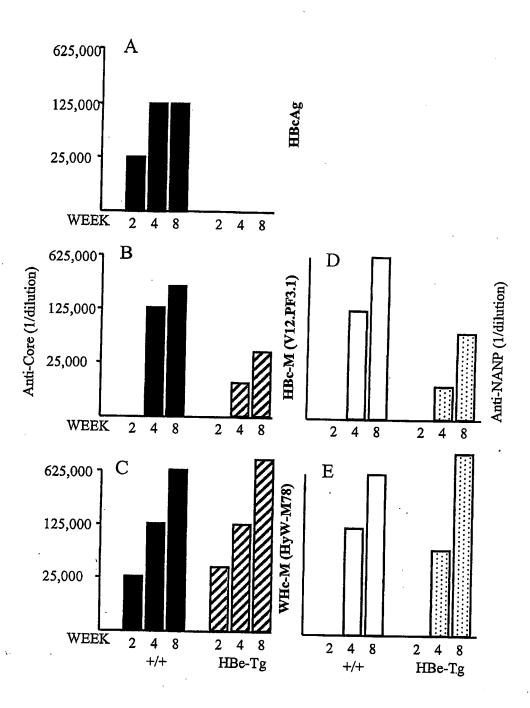


Fig. 12

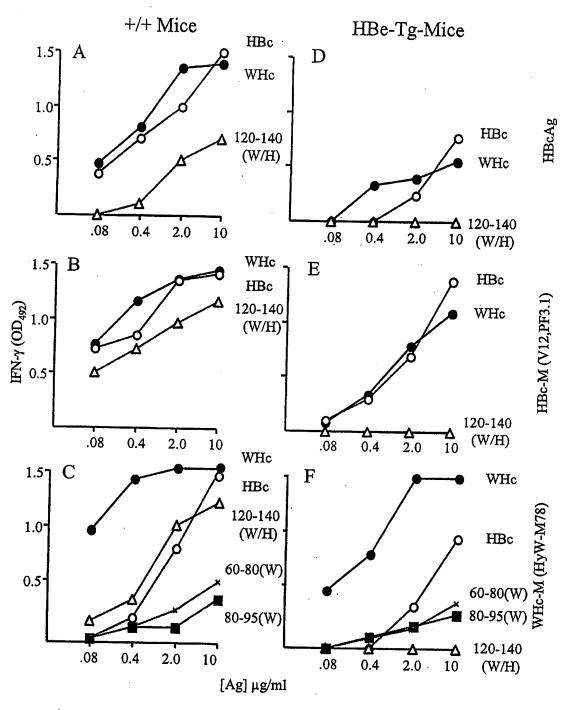
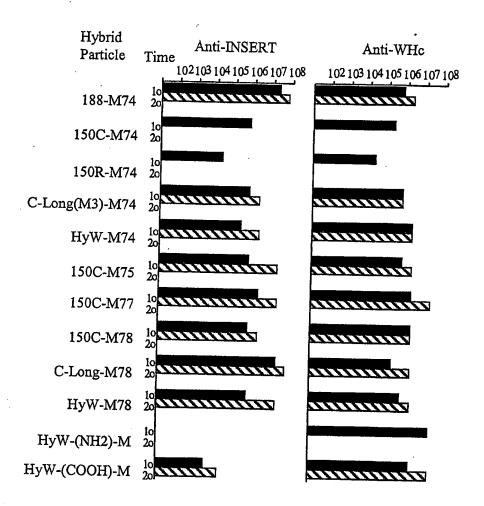


Fig. 13



IMMUNOGENICITY

Fig. 14

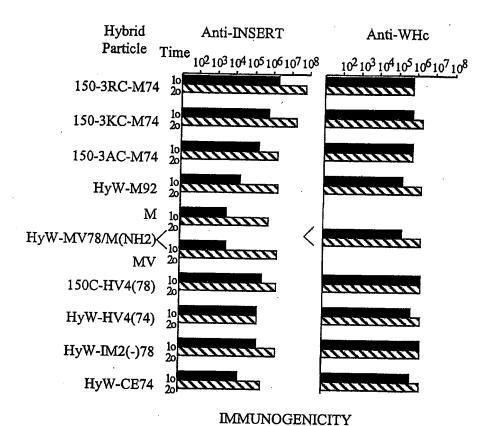


Fig. 15

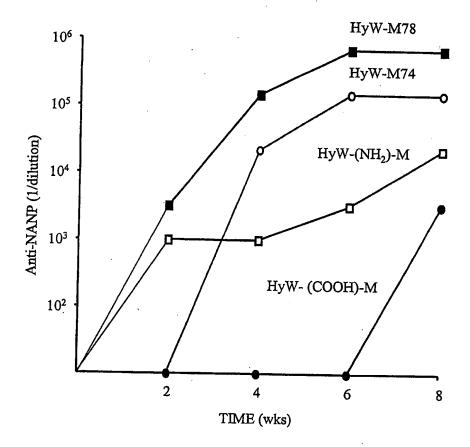


Fig. 16

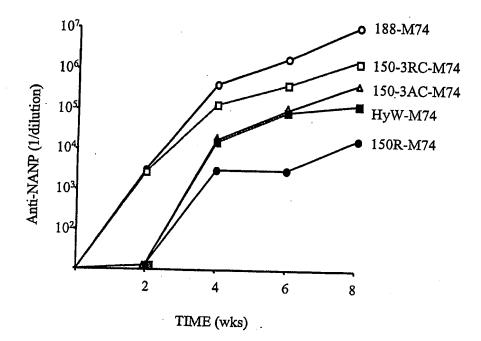
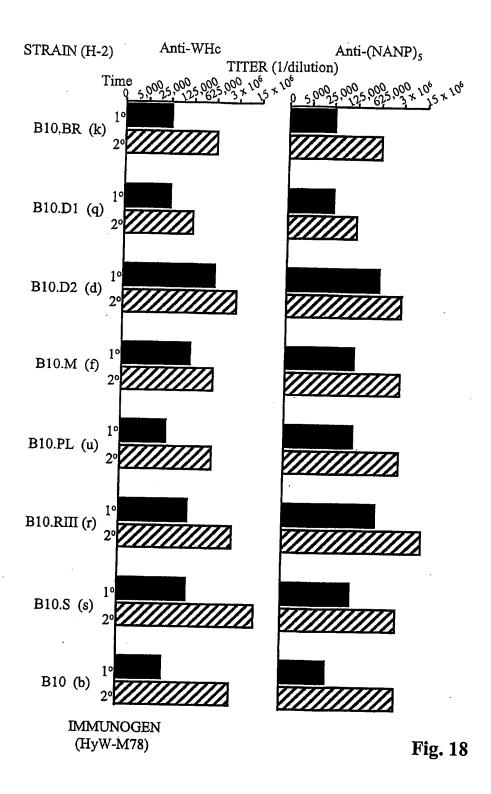
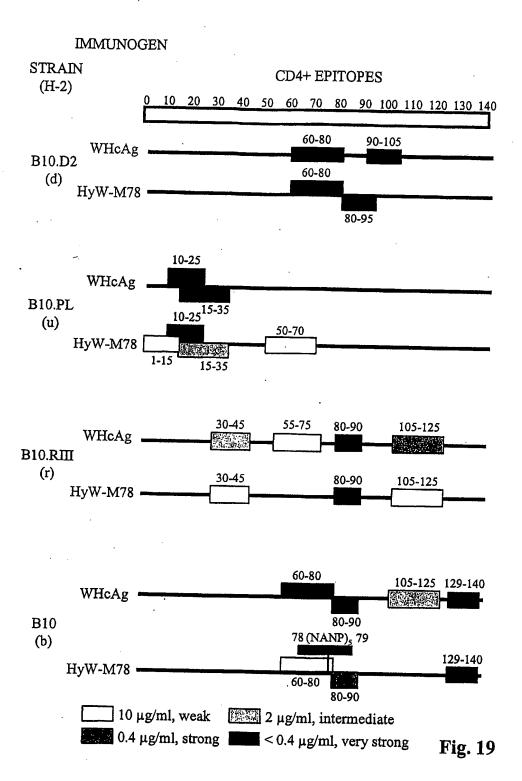
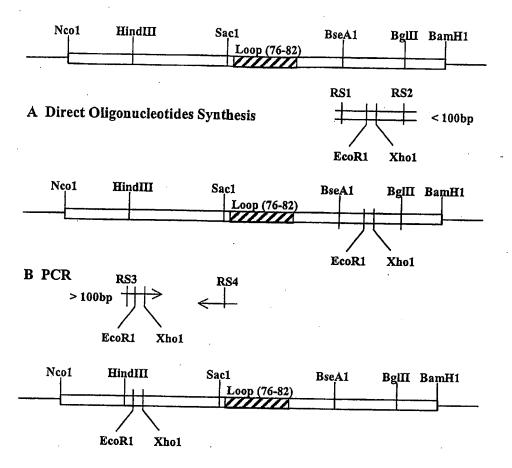


Fig. 17







C C-Terminal Modification

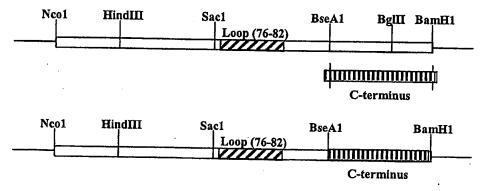


Fig. 20

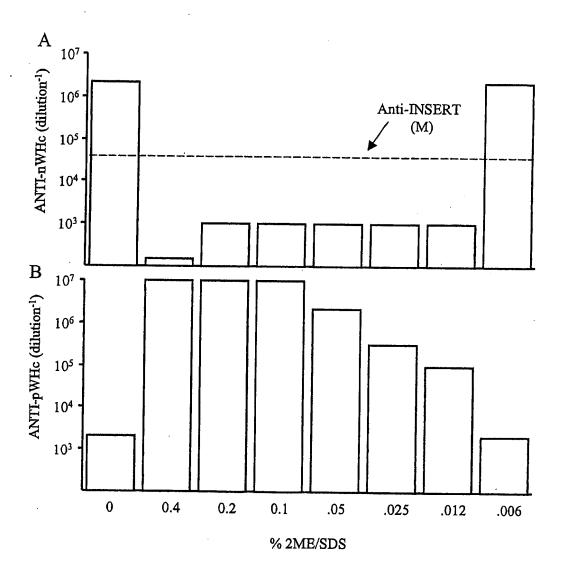


Fig. 21

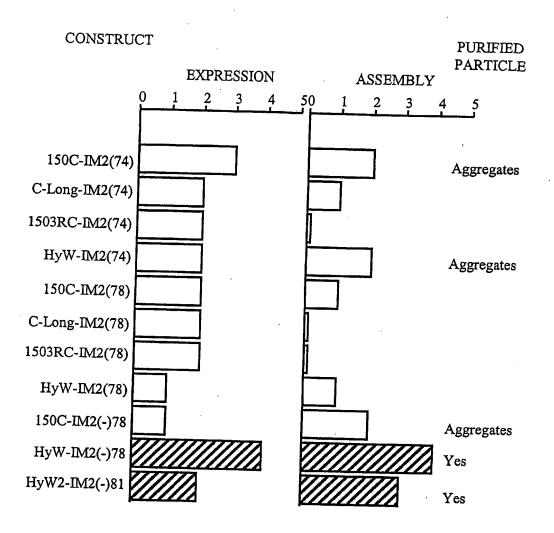


Fig. 22

Polyclonal Anti-HyW-IM2(-)78		625000	125000	125000	3×10^{6}	625000	625000	3×10^6	625000	3×10^6	15 x 10	ı	(1/Dilution)
mAb 14C2	Q S	51200	- 25600	- 12800	25600	6400	1600	12800	25600	102400	625000.	. 0	(Dilution= $0.5 \mathrm{OD}_{492}$)
	PIRNEWGCRCND-SS	1 1 1	1 1 1	1 1 1 1	1	1 1	1 1 1	- A	A	W - W -			9
	ETPIRNEW	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	A	- V	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	t t t t t t t t t t t t t t t t t t t	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	t t t t t t t t t t t t t t t t t t t	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	HyW-IM2(-)78	- '	
Fig. 23	Wt M2e M S L L T E V	P1	F2	F3	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	C7	1	, , , , , , , , , , , , , , , , , , ,	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	F9	Core-IM2(-) Particle	Core-M78 Particle	

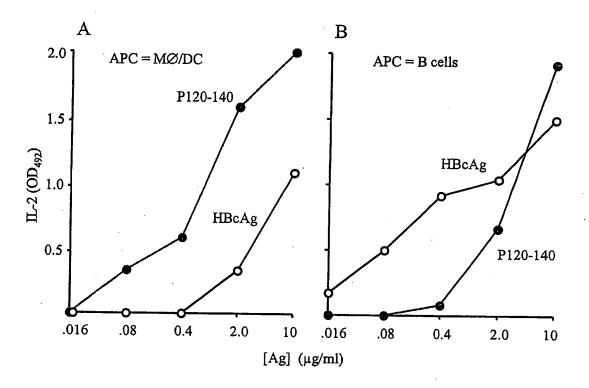
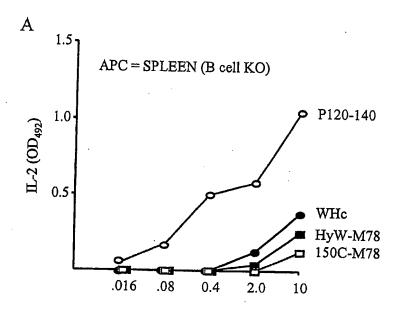


Fig. 24



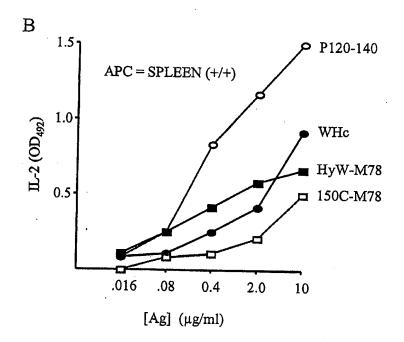


Fig. 25

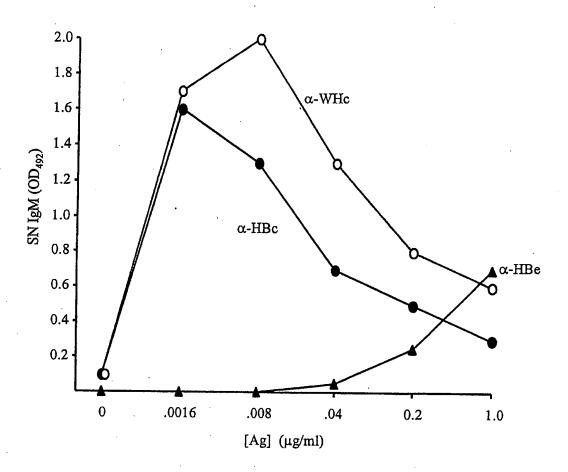


Fig. 26

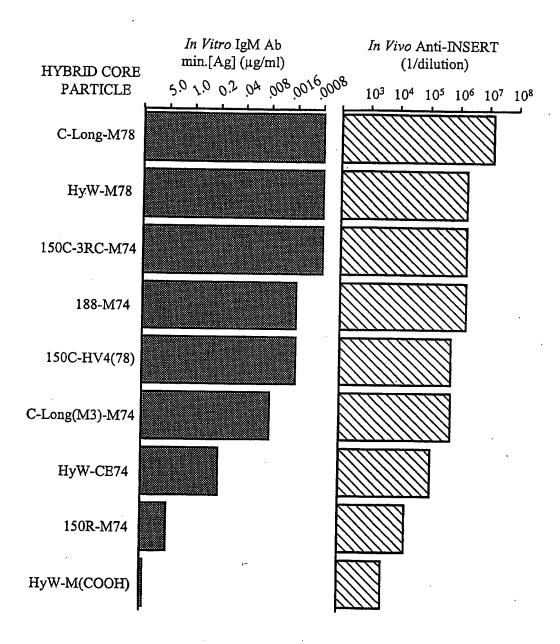


Fig. 27

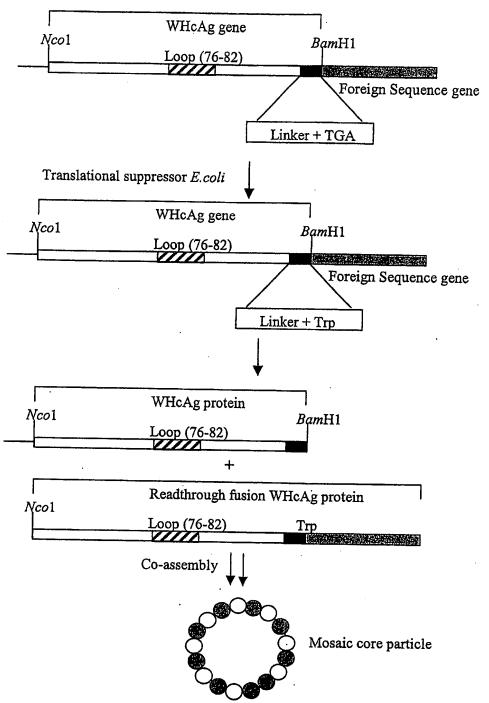


Fig. 28

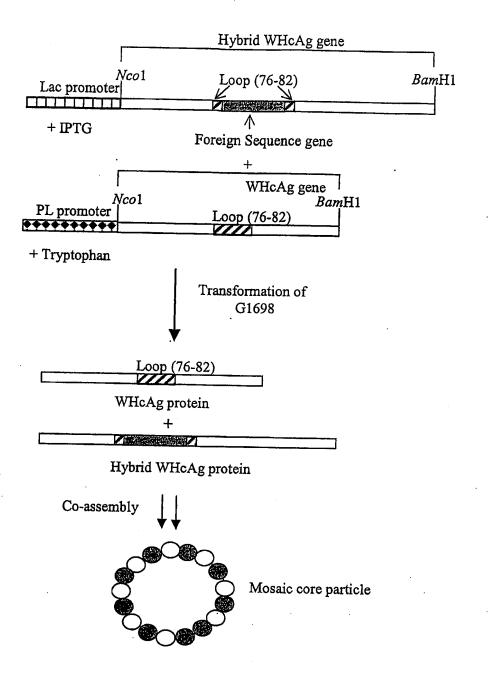
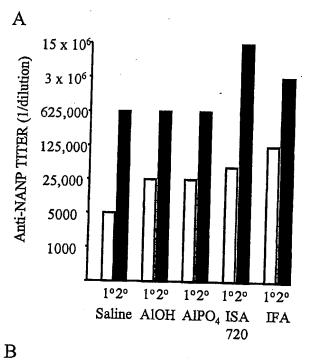


Fig. 29



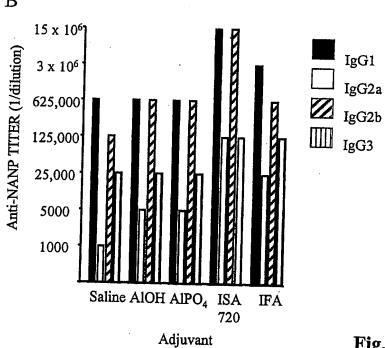


Fig. 30

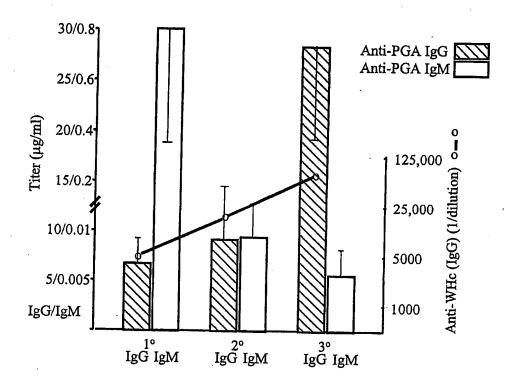


Fig. 31

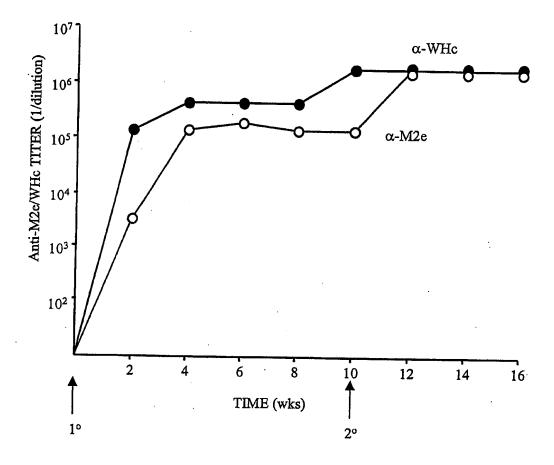


Fig. 32

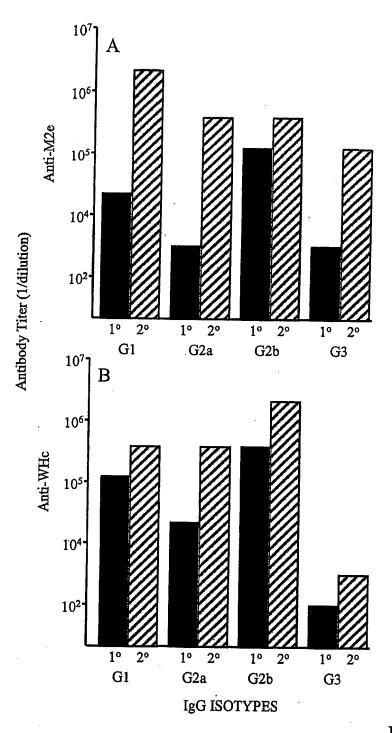


Fig. 33

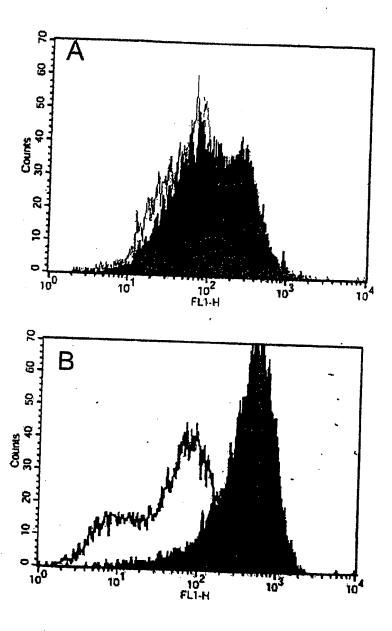


Fig. 34

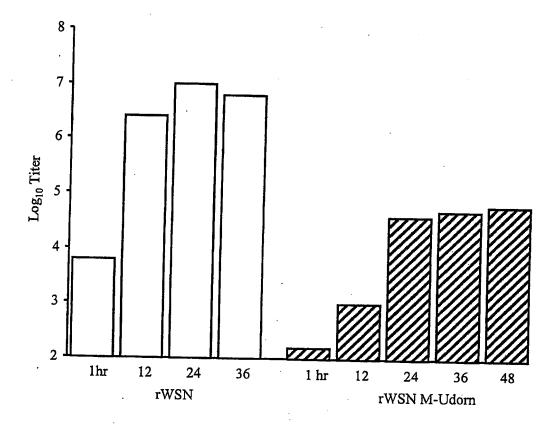


Fig. 35

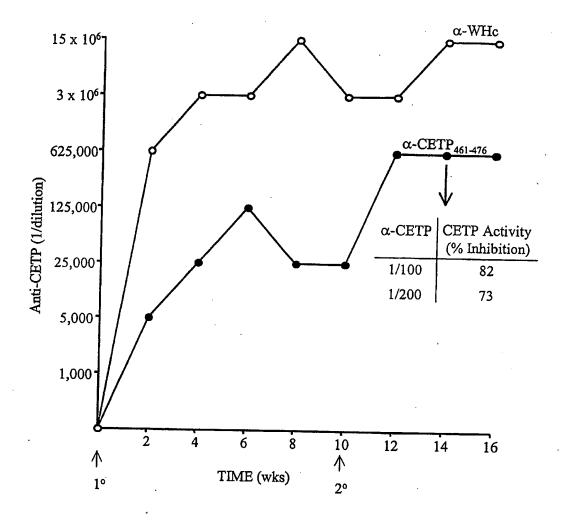


Fig. 36

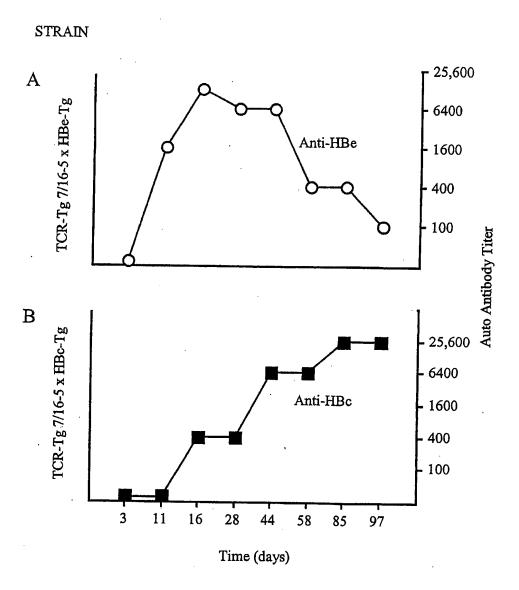


Fig. 37

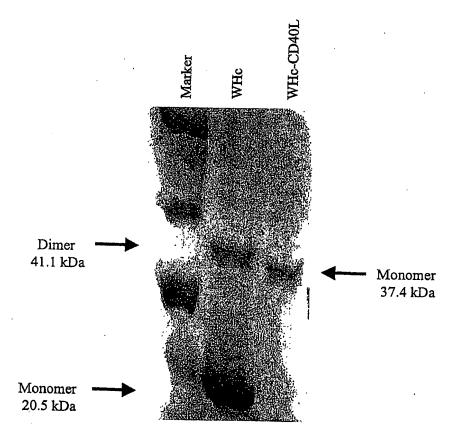


Fig. 38

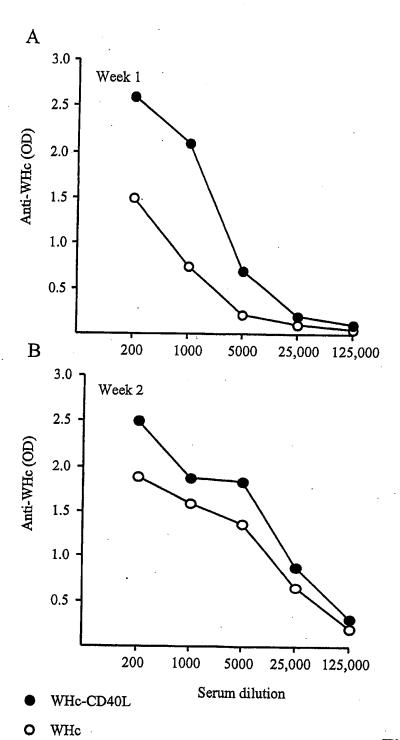


Fig. 39

Fig. 40

A Wild Type WHcAg DNA (SEQ ID NO:37)

ATGGACATAGATCCCTATAAAGAATTTGGTTCATCTTATCAGTTGTTGAATTTTCTTCC
TTTGGACTTCTTTCCTGACCTTAATGCTTTGGTGGACACTGCTACTGCCTTGTATGAAG
AAGAGCTAACAGGTAGGGAACATTGCTCTCCGCACCATACAGCTATTAGACAAGCTTTA
GTATGCTGGGATGAATTAACTAAATTGATAGCTTGGATGAGCTCTAACATAACTTCTGA
ACAAGTAAGAACAATCATTGTAAATCATGTCAATGATACCTGGGGACTTAAGGTGAGAC
AAAGTTTATGGTTTCATTTTGTCATGTCTCACTTTCGGACAACATACAGTTCAAGAATTT
TTAGTAAGTTTTGGAGTATGGATCAGGACTCCAGCTCCATATAGACCTCCTAATGCACC
CATTCTCTCGACTCTTCCGGAACATACAGTCATTAGGAGAAGAGGGGGTGCAAGAGCTT
CTAGGTCCCCCAGAAGACGCACTCCCTCTCCTCGCAGGAGAAGATCTCAATCACCGCGT
CGCAGACGCTCTCAATCTCCATCTGCCAACTGCTGA

B Wild Type WHcAg (SEQ ID NO:1)

MDIDPYKEFGSSYQLLNFLPLDFFPDLNALVDTATALYEEELTGREHCSPHHTAIRQAL VCWDELTKLIAWMSSNITSEQVRTIIVNHVNDTWGLKVRQSLWFHLSCLTFGQHTVQEF LVSFGVWIRTPAPYRPPNAPILSTLPEHTVIRRRGGARASRSPRRRTPSPRRRRSQSPR RRRSQSPSANC

'C Truncated WHcAg (SEQ ID NO:38)

MDIDPYKEFGSSYQLLNFLPLDFFPDLNALVDTATALYEEELTGREHCSPHHTAIRQAL VCWDELTKLIAWMSSNITSEQVRTIIVNHVNDTWGLKVRQSLWFHLSCLTFGQHTVQEF LVSFGVWIRTPAPYRPPNAPILSTLPEHTVI WO 2005/011571 PCT/US2004/023391

Fig. 41

A Wild Type GSHcAg DNA (SEQ ID NO:39)

ATGGACATAGATCCCTATAAAGAATTTGGTTCTTCTTATCAGTTGTTGAATTTTCTTCC
TTTGGACTTTTTTCCTGATCTCAATGCATTGGTGGACACTGCTGCTGCTCTTTATGAAG
AAGAATTAACAGGTAGGGAGCATTGTTCTCCTCATCATACTGCTATTAGACAGGCCTTA
GTGTGTTGGGAAGAATTAACTAGATTAATTACATGGATGAAGAATACAACAGAAGA
AGTTAGAAGAATTATTGTTGATCATGTCAATAATACTTGGGGACTTAAAGTAAGACAGA
CTTTATGGTTTCATTTATCATGTCTTACTTTTGGACAACACACAGTTCAAGAATTTTTG
GTTAGTTTTGGAGTATGGATTAGAACTCCAGCTCCTTATAGACCACCTAATGCACCCAT
TTTATCAACTCTTCCGGAACATACAGTCATTAGGAGAAGAGGAGGTTCAAGAGCTGCTA
GGTCCCCCCGAAGACGCACTCCCTCCTCGCAGGAGAAGGTCTCAATCACCGCGTCGC
AGACGCTCTCAATCTCCAGCTTCCAACTGCTGA

B Wild Type GSHcAg (SEQ ID NO:21)

MDIDPYKEFGSSYQLLNFLPLDFFPDLNALVDTAAALYEEELTGREHCSPHHTAIRQAL VCWEELTRLITWMSENTTEEVRRIIVDHVNNTWGLKVRQTLWFHLSCLTFGQHTVQEFL VSFGVWIRTPAPYRPPNAPILSTLPEHTVIRRRGGSRAARSPRRRTPSPRRRRSQSPRR RRSQSPASNC

C Truncated GSHcAg (SEQ ID NO:40)

MDIDPYKEFGSSYQLLNFLPLDFFPDLNALVDTAAALYEEELTGREHCSPHHTAIRQAL VCWEELTRLITWMSENTTEEVRRIIVDHVNNTWGLKVRQTLWFHLSCLTFGQHTVQEFL VSFGVWIRTPAPYRPPNAPILSTLPEHTVI Fig. 42

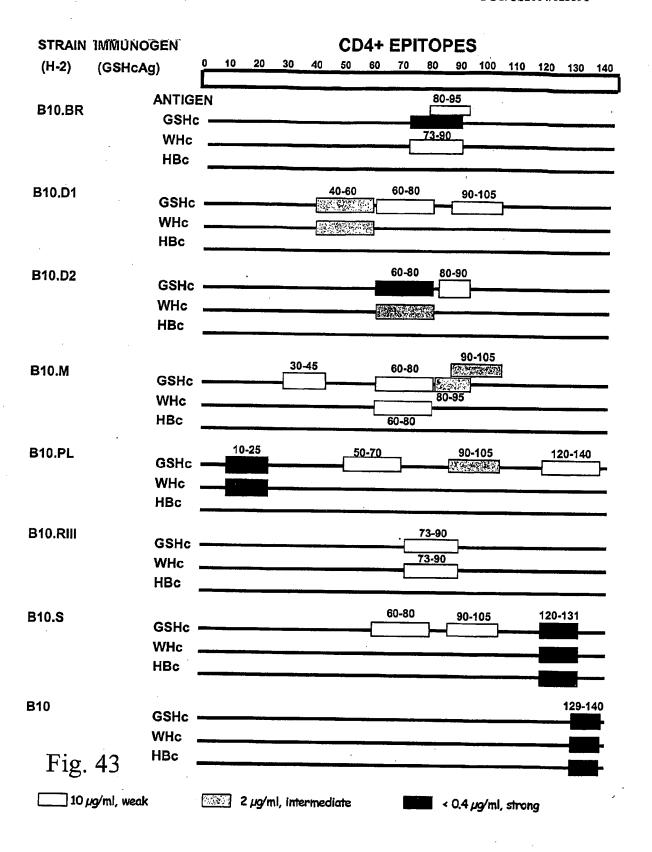
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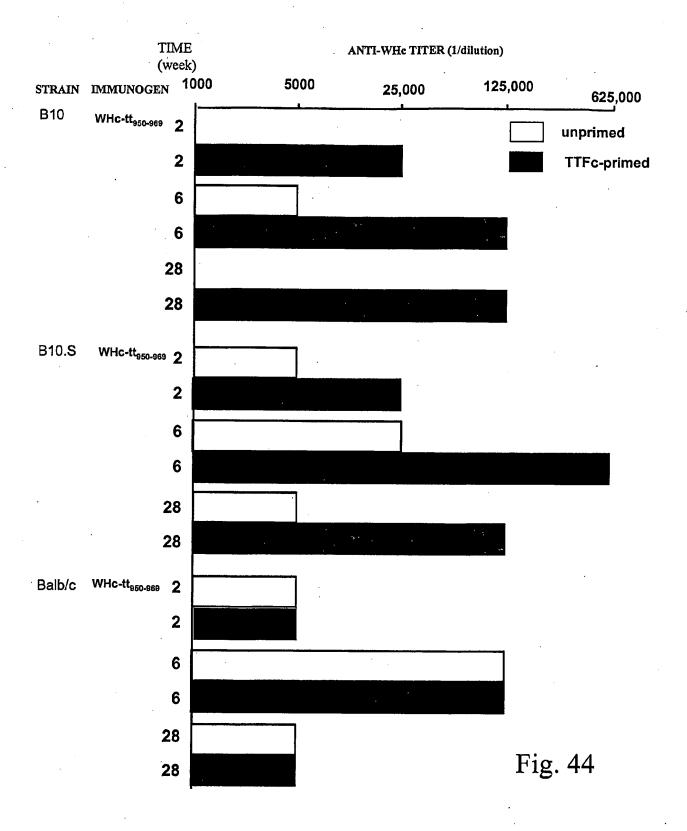
B Wild Type HBcAg (SEQ ID NO:41)

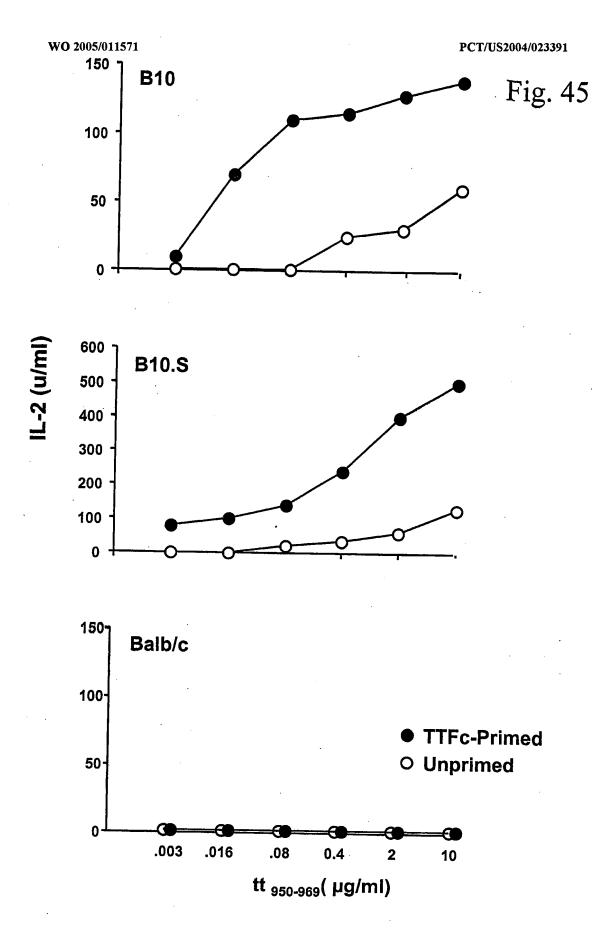
MDIDPYKEFGATVELLSFLPSDFFPSVRDLLDTASALYREALESPEHCSPHHTALRQAI LCWGELMTLATWVGVNLEDPASRDLVVSYVNTNMGLKFRQLLWFHISCLTFGRETVIEY LVSFGVWIRTPPAYRPPNAPILSTLPETTVVRRRGRSPRRRTPSPRRRRSQSPRRRRSQ SRESQC

C Truncated HBcAg (SEQ ID NO:58)

MDIDPYKEFGATVELLSFLPSDFFPSVRDLLDTASALYREALESPEHCSPHHTALRQAI 54 LCWGELMTLATWVGVNLEDPASRDLVVSYVNTNMGLKFRQLLWFHISCLTFGRETVIEY 1122 LVSFGVWIRTPPAYRPPNAP/LLSTLPETTVV







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10		F Q T T Q G M H E I A E S L R A V I P P F A P V P P
DHBV-S31 N32991 HIBY N2056 CHBV NC_001344 HBV ayw K65257 Chimp. HBV AP222323 Gibbon HBV AV077735 ROSS 'gooseHBV M95589 Orangutan HV NC_002168 MMD IID MMHV J02442 MCD IID MD IID	DHBV-S31 M32991 X R D HHBV M22056 Y R D DHBV NC_001344 Y R D HBV ayw X65257 L D D Chimp. HBV Ar232323 L D D Gibbon HBV Ar232323 L D D Ross' gooseHBV M95589 N R D Orangutan HV NC_002168 L D D MWHBV Ar046996 L D D GSHY K02715 N D D MGSH NC_00115 N D D AGSH NC_001719 V D D	HBV A22056 E D

790 AT I E A I T R P I QW A Q G G R K T S S G T A T I E A I T R P I QW A Q G G R N Q T K G T A T I E A I T R P I Q A A Q G G R N Q T K G T A T I E A I T R P I Q A A Q G G R N Q T K G T A T I E A I T R P I Q A A Q G G R N T S S G T A T I E A I T R P I Q A A Q G G R N T T S S G T A T A T R R R R R R R R R R R R R R R	220 230 240 E P R R R K V K T T F V Y G R R R K K R G R R R R R K V K T T V V Y G R R R K K K G R G R R R R K V K T T V V Y G R R R K K K G R G R R R R K V K T T V V Y G R R R R K K K G R T T V V Y G R R R R K K K G R T T V V Y G R R R R K K G R R R R R R K V K T T T V V Y G R R R R K G S P R R R R R R R R R R R R R R R R R R	250 G S P L P R S S S S H H R S S P R K G S P L P R N R G N Q T R S S P R R G S P L P R N S S S H H R S S P R R G S P L P R N S S S H H R S S P R R G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R E G S P L P R T S R D H H R S P R P S P R S P R E G S P L P R T S R D H H R S P R P S P R S P R P R P R P R P R P
DHEV-S31 M32991 K K K G R D K HEBV M22056 HEBV M22056 CHIMP. NC_001344 HBV ayw X65257 Chimp. HBV AF222323 Gibbon HBV AY077735 Ross'9008eHBV M95509 Crangutan HV NC_002168 MWHBV AR04596 GSHV K02715 MHV J02442 P K R P P N A Y R P P N A	HBV M22056	HIBO M22056 BHEV M22056 S S P S Q R A BHEV AYW X65257 Chimp. HBV AR222323 Glbcon HBV AR222323 Glbcon HBV AR077735 Ross 'gooseHBV M95589 A P T P Q R A RMHBV AR046996 GSHV K02715 WHV J02442 RASH NC_001719 R